Applied Physics A

Solids and Surfaces

Board of Editors

S. Amelinckx, Mol · **H. H. Andersen,** Aarhus
M. H. Brodsky, Yorktown Heights, NY
G. Eckhardt, Malibu, CA · **R. Gomer,** Chicago, IL
P. Hautojärvi, Espoo · **H. Ibach,** Jülich
H. K. V. Lotsch, Heidelberg · **D. Mills,** Irvine, CA
H. J. Queisser, Stuttgart · **R. Ulrich,** Hamburg
W. Weppner, Stuttgart · **H. P. J. Wijn,** Eindhoven

Volume A 27 · 1982

Springer-Verlag Berlin Heidelberg New York

Copyright

It is a fundamental condition that submitted manuscripts have not been published and will not be simultaneously submitted or published elsewhere. By submitting a manuscript, the authors agree that the copyright for their article is tranferred to the publisher if and when the article is accepted for publication. The copyright covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microform or any other reproductions of similar nature, and translations.
Photographic reproduction, microform, or any other reproduction of text, figures, or tables from this journal is prohibited without permission obtained from the publisher.

Special regulations for the USA

The Article Fee Code on the first page of an article in this journal indicates the copyright owner's consent that in the USA copies may be made for personal or internal use, provided the stated fee for copying beyond that permitted by Section 107 or 108 of the United States Copyright Law is paid through the Copyright Clearance Center, Inc., 21 Congress Street, Salem, MA 01970, USA.
If a code does not appear copies of the article may be made without charge, provided permission is obtained from the publisher.
The copyright owner's consent does not extend to copying for general distribution, for promotion, for creating new works, or for resale. Specific written permission must be obtained from the publisher for such copying.

The use of general descriptive names, trade names, trade marks, etc. in this publication, even if the former are not specifically identified, is not to be taken as a sign that such names are exempt from the relevant protective laws and regulations and may accordingly be used freely by anyone.

While the advice and information in this journal is believed to be true and accurate at the date of its going to press, neither the authors nor the editors nor the publisher can accept legal responsibility for errors or omissions that may have been made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Authors of this journal can benefit from library and photocopy fees collected by VG Wort if certain conditions are met. If an author lives in the Federal Republic of Germany or in West Berlin, it is recommended that he contact Verwertungsgesellschaft Wort, Abteilung Wissenschaft, Goethestrasse 49, D-8000 München 2, for detailed information.

Springer-Verlag Berlin · Heidelberg · New York
Printers: Brühlsche Universitätsdruckerei, Giessen
Printed in Germany © by Springer-Verlag Berlin · Heidelberg 1982

Applied Physics A Solids and Surfaces
© Springer-Verlag 1982

Contents

Invited Papers

Behrisch, R., see Børgesen, P., et al. 183
Børgesen, P., Behrisch, R., Scherzer, B.M.U.: Depth Profiling by Ion-Beam Spectrometry 183
Döhler, G.H., see Künzel, H., et al. 1
Künzel, H., Döhler, G.H., Ploog, K.: Determination of Photoexcited Carrier Concentration and Mobility in GaAs Doping Superlattices by Hall Effect Measurements . . . 1
Ploog, K., see Künzel, H., et al. 1
Scherzer, B.M.U., see Børgesen, P., et al. 183

Contributed Papers

Abdelghani, A., see Abou El Ela, A.H., et al. 161
Abou El Ela, A.H., Abdelghani, A., Labib, H.H.A.: Electrical Conductivity and Thermoelectric Power of Liquid Selenium Doped with Thallium and Indium 161
Alberga, G.E., Welzenis, R.G. van, Zeeuw, W.C. de: High Electric-Field Hall Effect Measurements on *n*-Type InSb at 77 K 107
Bernt, H., see Ryssel, K., et al. 239
Besenbacher, F., see Möller, W., et al. 19
Bloembergen, N., see Yen, R., et al. 153
Bøttiger, J., see Möller, W., et al. 19
Brabander, F. Van, see Segers, D., et al. 129
Burov, J.I., see Ta Din Kanh 95
Cutler, P.H., see Miskovsky, N.M., et al. 139
De-Sheng Jiang, Shin-Lin Chang: Strain Analysis and Optical Characterization of LPE InGaAsP Laser-Confining Layers 213
Diego, N. de, see Hidalgo, C. 149
Dirks, H., Eifert, B.: Preparation of Nb_3Sn Structures on Low Pinning Niobium Foils for Use in Guided Flux Motion Experiments 167
Dorikens, M., see Segers, D., et al. 129
Dorikens-Vanpraet, L., see Segers, D., et al. 129
Eifert, B., see Dirks, H. 167
Feuchtwang, T.E., see Miskovsky, N.M., et al. 139
Frank, G., Köstlin, H.: Electrical Properties and Defect Model of Tin-Doped Indium Oxide Layers 197
Frank, W., see Seeger, A. 171
Galvão da Silva, E., Gonser, U.: Determination of Relative Force Constant in β-Ti (Fe) Alloys by Means of the Mössbauer Second-Order Doppler Shift 89
Geim, K., Pensl, G., Schulz, M.: Shallow Acceptor Population and Free Hole Concentration in Si:In and Si:Ga with IR-Photoexcitation 71
Geiss, V., Kneller, E., Nest, A.: Magnetic Behavior of Amorphous Sm-Co Alloy Films 79
Geiss, V., see Nest, A., et al. 177
Gerstenhauer, E., see Görtz, W., et al. 35
Gilgen, H.H., see Rytz-Froidevaux, Y., et al. 133
Görtz, W., Gerstenhauer. E., Grosse, P.: Photoconducting Tellurium for Submillimeterwave Detectors 35
Gonser, U., see Galvão da Silva, E. 89
Grosse, P., see Görtz, W., et al. 35
Gus'kov, A.P., see Korotchenko, A.I., et al. 121
Haberger, K., see Ryssel, H., et al. 239
Hansen, H.E., Linderoth, S., Wierzchowski, W., Petersen, K.: Binding of Gas Atoms to Extended Crystal Defects in Molybdenum Studied by Positrons 247
Haus, H.A.: Electrodynamics of Moving Media and the Force on a Current Loop 99
Hautojärvi, P., see Yli-Kauppila, J., et al. 31
Hautojärvi, P., Johansson, J., Vehanen, A., Yli-Kauppila, J., Hillairet, J., Tzanétakis, P.: Trapping of Positrons at Vacancies in Magnesium 49
Hidalgo, C, Diego, N. de: Positron Trapping at Grain Boundaries 149
Hillairet, J., see Hautojärvi, P., et al. 49
Hirvonen, J.: Annealing Kinetics of Ion-Implanted Nickel-Aluminium Alloy 243
Hoffmann, H.J.: Charge Carrier Statistics of Semiconductors Containing Defects with Negative Electronic Correlation Energy 39
Hoffmann, K., see Ryssel, H., et al. 239
Jantsch, W., see Wünstel, K., et al. 251
Johansson, J., see Hautojärvi, P., et al. 49
Kindl, P., see Puff, W., et al. 257
Kivaisi, R.T., Stensland, L.: Spectral Selectivity of Nickel and Chromium Rough Surfaces 233
Kneller, E., see Geiss, V., et al. 79
Kneller, E., see Nest, A., et al. 177
Köstlin, H., see Frank, G. 197
Koma, A., see Saiki, K., et al. 263
Korotchenko, A.I., Samokhin, A.A., Gus'kov, A.P.: Effect of Intensity Modulation on Radiation-Induced Melting and Vaporization of Solids 121
Kumagai, O., see Wünstel, K., et al. 251
Künzi, H., see Yli-Kauppila, J., et al. 31
Kurz, H., see Yen, R., et al. 153
Labib, H.H.A., see Abou El Ela, A.H., et al. 161
Linderoth, S., see Hansen, H.E., et al. 247
Liu, J.M., see Yen, R., et al. 153
Louie, S.A., see Maldonado, C.D. 219
Lucas, A.A., see Miskovsky, N.M., et al. 139
Maldonado, C.D., Louie, S.A.: Thermal Redistribution of Boron Implants in Bulk Silicon and SOS Type Structures 219
Mascher, P., see Puff, W., et al. 257
Miskovsky, N.M., Cutler, P.H., Feuchtwang, T.E., Lucas, A.A.: The Multiple-Image Interactions and the Mean-Barrier Approximation in MOM and MVM Tunneling Junctions 139
Möller, W., Besenbacher, F., Bøttiger, J.: Saturation and Isotope Mixing During Low-Temperature Implantations of Hydrogen into Metals 19
Morimoto, J., see Soeya, T., et al. 125
Moser, P., see Yli-Kauppila, J., et al. 31
Nest, A., see Geiss, V., et al. 79
Nest, A., Kneller, E., Geiss, V.: Magnetic Torque Behavior and Rotational Hysteresis of Amorphous Uniaxial Sm-Co Alloys Films 177
Oesterreicher, H., see Parker, F.T. 65
Okuyama, F.: Cathodic Needle Growth from $Mo(CO)_6$ Vapors at Higher Electric Fields 57

Parker, F.T., Oesterreicher, H.: Analysis of Magnetic Interactions and Structure in R_6Mn_{23} 65
Pensl, G., see Geim, K., et al. 71
Petersen, K., see Hansen, H.E., et al. 247
Ponpon, J.P.: On the Properties of Real Cadmium Telluride Surfaces 11
Prinke, G., see Ryssel, H., et al. 239
Puff, W., Mascher, P., Kindl, P., Sormann, H.: On the Trapping of Positrons in Cadmium in the Temperature Range from 80 to 330 K 257
Ryssel, H., Prinke, G., Bernt, H., Haberger, K., Hoffmann, K.: Ion Beam Exposure of Resists. I. Statistical Limitations 239
Rytz-Froidevaux, Y., Salanthé, R.P., Gilgen, H.H., Weber, H.P.: Cadmium Deposition on Transparent Substrates by Laser Induced Dissociation of $Cd(CH_3)_2$ at Visible Wavelengths 133
Saiki, K., Tanaka, S., Koma, A.: Energy Distributions of Low Energy H Ions Backscattered from Graphite, Stainless Steel, and Molybdenum 263
Salathé, R.P., see Rytz-Froidevaux, Y., et al. 133
Samokhin, A.A., see Korotchenko, A.I., et al. 121
Schulz, M., see Geim, K., et al. 71
Seeger, A., Frank, W.: On the Theory of the Diffusion of Gold Into Dislocated Silicon Wafers 171
Segers, D., Brabander, F. Van, Dorikens-Vanpraet, L., Dorikens, M.: Isothermal Annealing of Room Temperature Deformed Iron Studied with the Positron Annihilation Technique 129
Shin-Lin Chang, see De-Sheng Jiang 213
Soeya, T., Morimoto, J., Takagi, M.: Line Emission from Semiconductive CdS Single Crystals 125
Sormann, H., see Puff, W., et al. 257
Stensland, L., see Kivaisi, R.T. 233
Ta Din Kanh, Burov, J.I.: Optical Method for Measuring the Coupling Constant of Surface Acoustic Waves 95
Takagi, M., see Soeya, T., et al. 125
Tanaka, S., see Saiki, K., et al. 263
Tzanétakis, P., see Hautojärvi, P., et al. 49
Vehanen, A., see Hautojärvi, P., et al. 49
Wagner, P., see Wünstel, K. 207
Wagner, P., see Wünstel, K., et al. 251
Weber, H.P., see Rytz-Froidevaux, Y., et al. 133
Welzenis, R.G. van, see Alberga, G.E., et al. 107
Wierzchowski, W., see Hansen, H.E., et al. 247
Wünstel, K., Wagner, P.: Interstitial Iron and Iron-Acceptor Pairs in Silicon 207
Wünstel, K., Kumagai, O., Wagner, P., Jantsch, W.: Deep Levels Related to Transition Metals in Si Under Hydrostatic Pressure 251
Yen, R., Liu, J.M., Kurz, H., Bloembergen, N.: Space-Time Resolved Reflectivity Measurements of Picosecond Laser-Pulse Induced Phase Transitions in (111) Silicon Surface Layers 153
Yli-Kauppila, J., Moser, P., Künzi, H., Hautojärvi, P.: Positron Lifetime Measurements on Electron Irradiation Damage in Amorphous $Pd_{80}Si_{20}$ and $Cu_{50}Ti_{50}$ Alloys 31
Yli-Kauppila, J., see Hautojärvi, P., et al. 49
Zeeuw, W.C. de, see Alberga, G.E., et al. 107

Indexed in Current Contents